

Common Goals for the Science and Practice of Behavior Analysis: A Response to Critchfield

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In his scholarly and thoughtful article, “Interesting Times: Practice, Science, and Professional Associations in Behavior Analysis,” Critchfield (2011) discussed the science-practice frictions to be expected in any professional organization that attempts to combine these interests. He suggested that the Association for Behavior Analysis International (ABAI) focus on its original science-advancement mission, including practice, but leave practitioner guild issues such as licensure to the Association of Professional Behavior Analysts (APBA). I concur. However, as Critchfield stated, ABAI can continue to offer much of interest to practitioners. In this response, I suggest that keeping our science-practice union as strong as possible would benefit all behavior analysts. I also describe relations between two major ecology and environmental science associations that may offer instructive parallels.

Behavior analysis as a field is based not in a content area but on functional scientific principles, primarily those of operant and respondent learning. These principles encompass great breadth in both science and practice (a challenge in itself for behavior-analytic associations). Although these principles are increasingly being taught and incorporated in all relevant fields of science and practice, full acceptance is still distant. Therein lies an important common challenge.

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COMMON INTERESTS

Larger organizations are more likely to command the resources to be influential. To magnify its influence, ABAI belongs to the Federation of Associations in Behavioral and Brain Sciences. APBA and ABAI could routinely join forces in a similar manner on efforts of mutual interest. But if enough practitioners leave ABAI, its smaller size may have some negative repercussions for scientists and practitioners alike.

For example, because of ABAI’s large membership and strong attendance at its main annual conference, it has been able to attract and fund many leading scientists and practitioners from related areas to deliver B. F. Skinner lectures. As someone who has helped to bring Skinner lecturers to ABAI, I am very much aware of the dual benefits: The lecturers learn about us, and we learn how far our principles extend. If ABAI shrinks dramatically and can sponsor far fewer such lectures, that would be a significant loss. Fewer practitioners in ABAI also means fewer people who receive *The Behavior Analyst*, a valuable dissemination and educational tool that covers topics intended to be of interest to all behavior analysts. Fewer practitioners in ABAI might also mean fewer practitioners who attend ABAI’s main annual conference, the primary venue for cross-fertilization.

Someday ABAI may return to its smaller, scientist-dominated size because associative learning principles will be fully integrated everywhere they apply, much as principles of physics and biology are incorporated into engineering and medicine. Meanwhile, broad dissemination of a

coherent basic and applied science may benefit practitioners as much as scientists. A science base that is universally recognized and respected gives credibility to its practitioners, bringing more jobs, improved methods, and greater visibility and impact.

ASSOCIATIONS IN ECOLOGY AND ENVIRONMENTAL SCIENCE

It may be instructive to consider the Ecological Society of America (ESA) and the National Association of Environmental Professionals (NAEP) as models for ABAI and APBA, respectively.¹ Like ABAI and APBA, ESA and NAEP share a coherent science base. Founded nearly a century ago, ESA describes itself as the largest professional ecological sciences organization in the world. Its 10,000 members include basic and applied scientists and practitioners, as ABAI does.² Indeed, ESA's Applied Ecology section is one of its largest. ESA was interdisciplinary from the start, and for years the presidency officially alternated between a botanist and a zoologist (Burgess, 1977)—much as if ABAI in its early scientist-dominated years had decided to alternate between a basic scientist and an applied scientist. Like behavior-analytic practitioners, ecological and environmental science practitioners work in a variety of areas (e.g., biotechnology, ecological restoration, management of invasive species, and sustainability). Ecological scientists themselves also specialize in a variety of areas, and frequently belong to separate organizations devoted to botany, zoology,

¹ My information, however, is largely limited to these organizations' websites: www.esa.org (including the 2011 annual report) and www.naep.org. An additional helpful source was Lilly Schwartz, Membership Manager for ESA (personal communication, February 8, 2012). Burgess (1977) is available through the ESA website.

² As is the case for ABAI, students are a significant proportion of the ESA membership, currently 25%.

and so on, with resulting multiple affiliation interests, rather like the practitioners.

A notable source of friction was the extent of ESA's advocacy for land preservation, which led to the formation of a splinter group that became the Nature Conservancy (Burgess, 1977). Science-practice frictions have not been lacking, either. Like ABAI, long after its founding, ESA saw considerable growth in the number of practitioners, beginning in the 1970s with the success of the environmental movement. NAEP was founded then because of this trend, and is beginning to approach ESA in size. Although there appear to be no licensure issues, the demand for practitioners led to competing certification programs begun at around the same time. ESA manages the Certified Ecologist credential, which involves no time-consuming and expensive testing. NAEP originated the Certified Environmental Professional credential, which is now managed by a separate academy, much like the Behavior Analyst Certification Board.³

ESA as a science-advancement, scientist-dominated association has its headquarters in Washington, DC, and advocates at the state, national, and international levels. ESA's high-impact journals bring substantial revenue, and include *Ecological Applications*, corresponding to ABAI's *Behavior Analysis in Practice*. The annual conference is smaller than ABAI's, typically between 3,000 and 4,000 participants. (No continuing education units, or CEUs, are currently required for continuing Certified Ecologist certification, presumably affecting attendance.) All ESA members receive one ESA journal in common, corresponding to *The Behavior Analyst*. Book reviews in

³ The Certified Ecologist credential requires only a check of academic accomplishments, work experience, and contributions. The NAEP's program is similar to the ESA's, but requires in addition a take-home essay exam and a telephone interview.

another ESA journal, *Ecology*, were considered by one of the field's historians to have been an important means of maintaining conceptual coherence and disseminating findings of general importance (Burgess, 1977). Some ecologists belong to both ESA and NAEP, and I imagine some practitioners who do not belong to ESA nonetheless attend its annual conference periodically. Naturally, practitioners also stay on top of aspects of the science that interest them or affect their practice (just as scientists follow relevant practice areas).

With all these efforts to retain practitioners, how many does ESA have? At the moment, practitioner membership (if defined as those who work for for-profit companies) is at a low point, only around 7% of the regular membership. Critchfield's claim that science-and-practice organizations tend to be dominated by one contingent or the other is upheld.

SUGGESTIONS

For the time being, ABAI is a science-advancement, practitioner-dominated organization near its historic peak in size. Should ABAI and APBA continue to evolve in their current directions, however, ABAI will likely shrink and APBA will grow, partly at ABAI's expense (Critchfield, 2011). Can ABAI offer enough to practitioners to retain more of them, accruing the corresponding benefits to all?

As Critchfield pointed out, an organization that has had a significant impact on basic and applied behavior analysis is the practitioner-dominated American Psychological Association (APA), with its huge membership of over 150,000. Scientists form a distinct minority in APA, yet it serves them, and their involvement sometimes helps their causes. Might behavior-analytic scientists and practitioners alike be willing to make a few sacrifices in order to

maintain a significant size for ABAI, with the resulting economies of scale and accompanying benefits of greater visibility, more unity, dissemination, and cross-fertilization, and enhanced impact?

From a recent ESA member survey, the most common reason members gave for belonging was to support the field of ecology. The scientific principles that form the foundation of behavior analysis are still marginalized or ignored far too often, as are the resulting applications. Advancing our basic and applied science gives behavior-analytic scientists and practitioners a strong common goal that might, perhaps, serve to maintain our bonds a while longer, above and beyond that shared science itself.

As Marr (1991) pointed out, the contingencies of practitioner accreditation offer one potential means of maintaining productive links between science and practice. Practitioners who have had little experience with the basic science, for example, may be less likely to value it.

What can ABAI do to keep itself attractive to practitioners? The CEUs that ABAI offers at its conferences surely help. Some of ABAI's smaller conferences focus on applied science and practice. ABAI regularly offers tutorials on conceptual and basic-science topics designed for practitioners as well as others unfamiliar with particular areas. And perhaps ABAI might consider highlighting conference presentations of general interest in some way. Topics of interest to all behavior analysts could include translational work, general conceptual and theoretical work, science in the public interest, history, dissemination efforts that benefit us all, neuroscience advances with implications for practitioners as well as scientists, applications in new areas, and, of course, the B. F. Skinner lectures. These are the sorts of topics featured in *The Behavior Analyst*. (At some point, planned overlap of "general interest" highlights with tracks of special interest to

practitioners could even be a regular part of ABAI during the beginning or middle of the conference, rather like APA's now-defunct "science weekend.") The way in which the science-oriented meeting of the Society for the Quantitative Analyses of Behavior complements mainly practice-oriented workshops at the beginning of ABAI's annual conference has seemed to work well for years now. ABAI's large range of simultaneous tracks also continues to offer something for everyone.

The bottom line is that we all still have much to gain from continued association, as indeed we all still have much to learn from each other. Applied scientists fall in the middle on the basic science-practice spectrum, with interests presumably covering a broad swath. At the ends of the spectrum, some basic scientists attend practitioner talks, and some practitioners attend basic science talks, and many across the spectrum attend the talks on topics of relevance to all. All this is possible because of the scope of the annual meeting. We

talk to each other, enjoying "the productive intellectual conversations between practitioners and scientists that are so appealing in a field with conceptual coherence" (Critchfield, p. 309). For behavior analysis, as for ecology, we expect that good science will ultimately prevail. But for the foreseeable future, our effectiveness in science advancement and dissemination may depend on taking as much advantage as possible of our combined strength.

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